



# AMERICAN ENGINEERING GROUP

## PRODUCT DEVELOPMENT PROJECTS

-Abraham Pannikottu  
Operations Manager



ISO 9001:2000

## Innovation: Patent (AEG IP)

AEG, through its founders, holds numerous utility and design patents pending by the United States Patent Office. Following are some examples:

- Torsional Damper
- Three Piece Golf Ball
- Bi-polar plate for Fuel Cell
- Fuel cell dual seal
- Polyurethane solid tires
- Tire Performance, Durability  
& Quality Prediction
- Flexible Personal Armor
- Dual Damper
- Carbon Fiber Tires
- Posture Perfect Backpack
- Carbon Fiber Knee Brace

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## AEG Defense Engineering Products & Services

### **Composite Product Experience**

- Flexible Armor appliqué (recent project with defense)
- Composite Vehicle Armor
- Composite Military Shelter
- Honeycomb Aircraft Wing
- Carbon Fiber Tires( run flat with wireless monitoring system)
- Wireless sensors system for health monitoring of vehicle systems (on-board system)
- for sensing -pressure, acceleration, temperature and deflection

### **Component Prototyping**

- Prototype development: Metal, Rubber, Composites and Plastics
- FMEA and testing

## AEG Defense Engineering Products & Services (contd..)

### **Computer Simulation and Analysis**

- Solid Modeling
- Analysis Capabilities (FEA, CFD and NVH)

### **Product Manufacturing Experience**

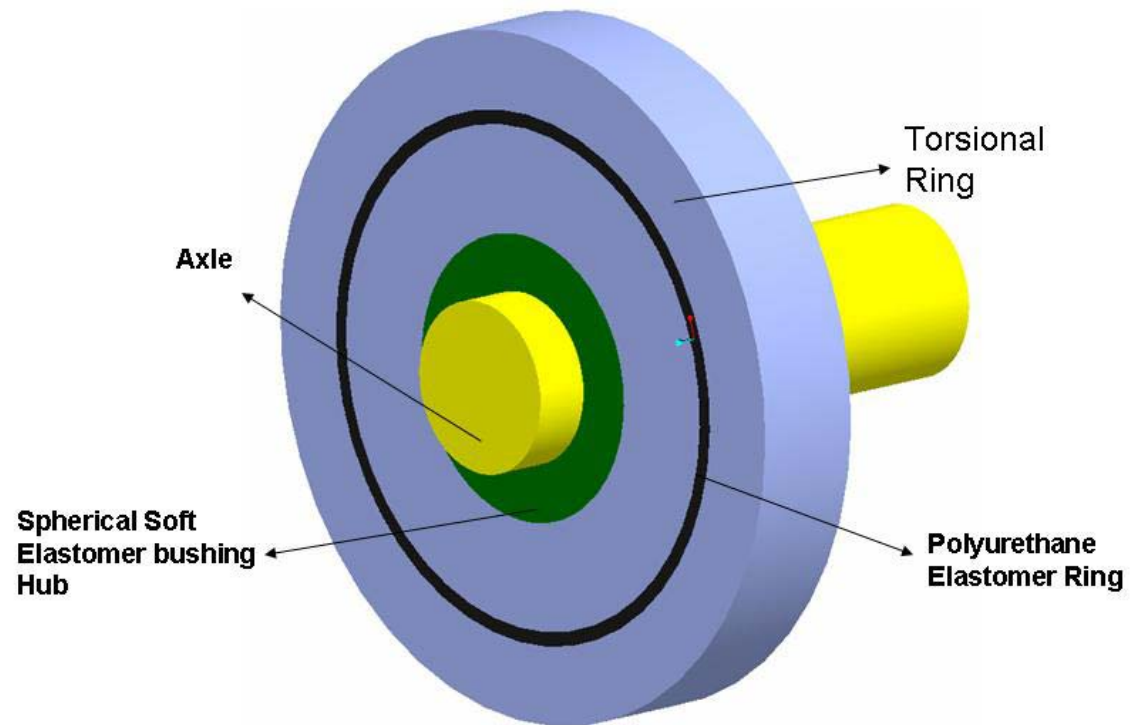
- Manufacturing capability in Metal, Rubber, Plastic and composite components

## Posture Perfect Back Pack Insert



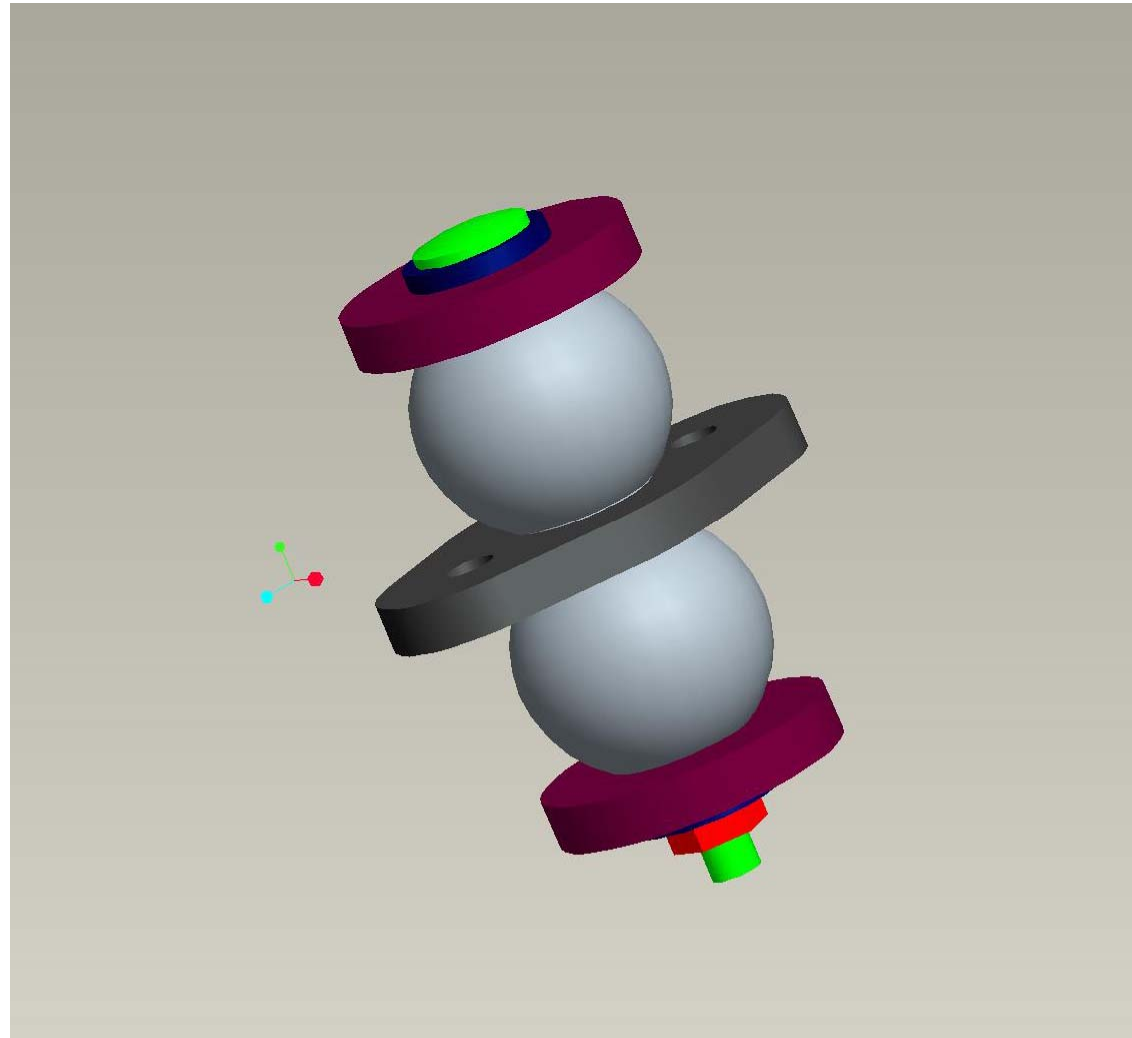
**Note:** Received 6 awards including awards from the Cleveland Clinic Lerner Research Institute and the Cleveland Clinic Department of Biomedical Engineering

## Dual Elastomer Torsional Damper System



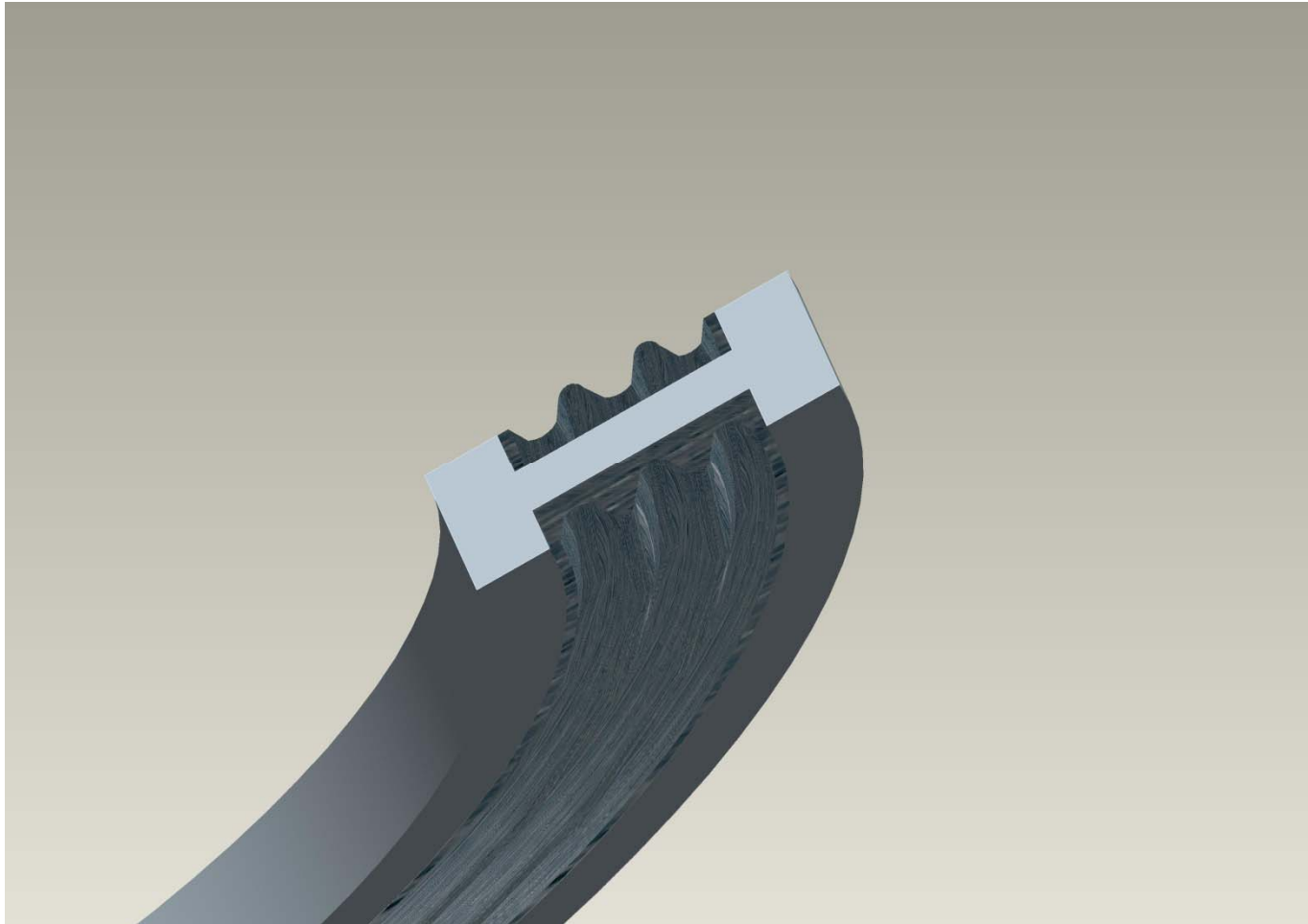
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## Shock and Vibration Mounting System



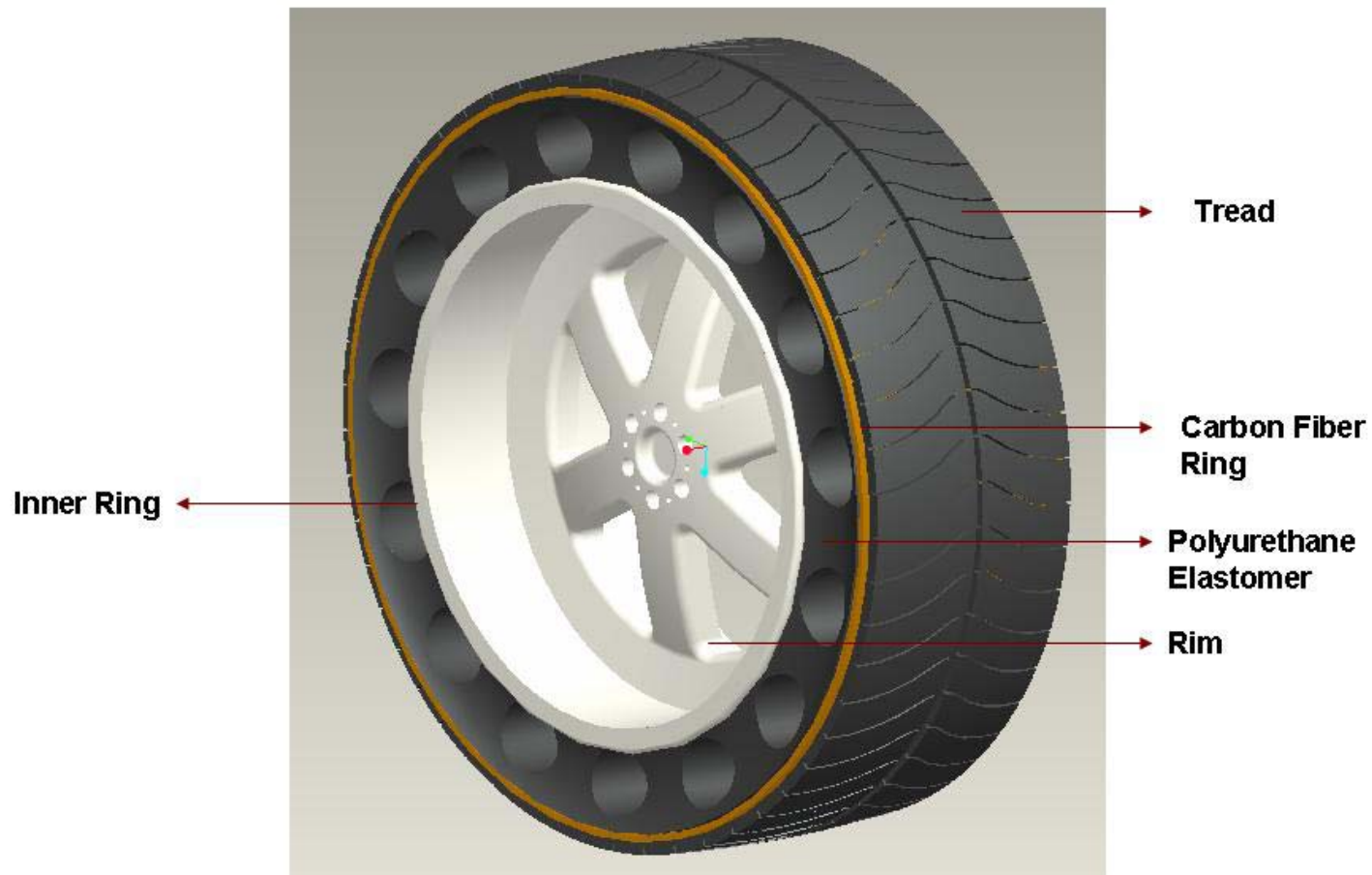
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## Fuel Cell Nanocomposite Double Lip Seal





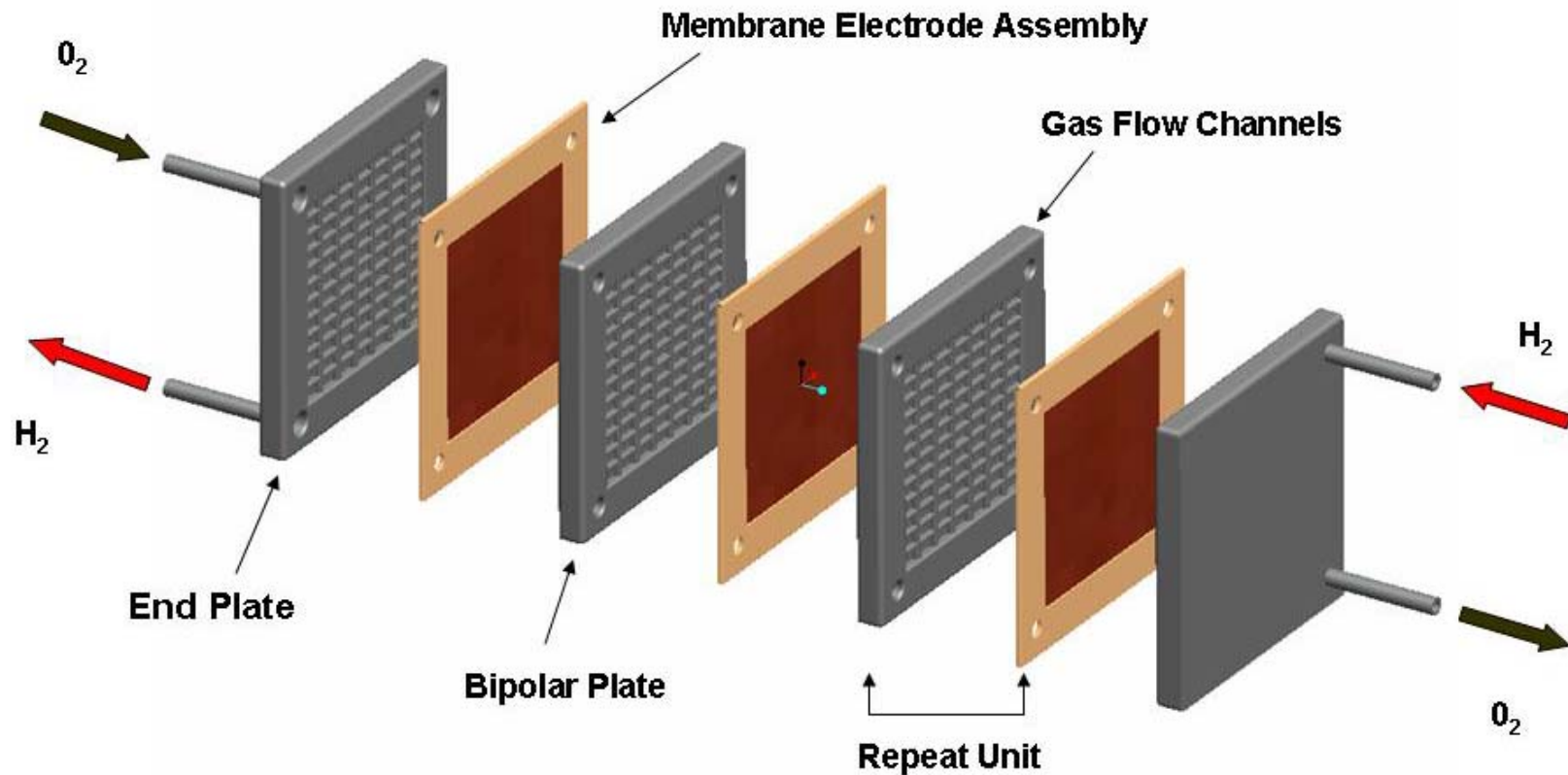
## Carbon Fiber-Polyurethane Solid Tire



**Note:** Published in Tire Asia, Edition: Feb/Mar 2009, Pg 56

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## Carbon Fiber-Elastomer Composite Bipolar Plate for PEM Fuel Cells



**Note:** AEG has been awarded SAE 2008 tech award for this innovative Concept

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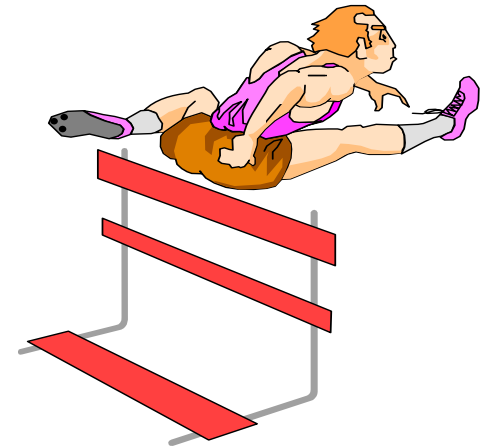
- See our Technical briefs for more information about the above products

[www.engineering-group.com/technical\\_briefs.php](http://www.engineering-group.com/technical_briefs.php)

# Thank you

- **Product Development**
  - **Failure Analysis**
- **Finite Element Analysis**
  - **Prototyping**

**(ISO 9001:2000)**



***“Progress through continuous innovation, technology and customer success”***